

*Report  
of the .*

*Environmental Assessment  
Process  
Improvement Team*

**January 1994**

*Prepared by team members from:*

*DP-3.2*

*EH-25*

*EM-22*

*GC-11*

*Albuquerque Operations Office*

*Idaho Operations Office*

*Kansas City Area Office*

*Los Alamos Area Office*

*Oak Ridge Operations Office*



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## Executive Summary

In late 1992, Department of Energy Weapons Production Plant Managers and Design Laboratory Managers identified a need to reduce review and approval time for NEPA documents, particularly Environmental Assessments (EAs).

As a result of the identified need, a Team composed of DOE Headquarters and Operations Office personnel used a seven-step Process Quality Management Improvement technique to analyze the DOE EA process and recommend improvements.

In step 1, establish process management responsibilities, NEPA documentation owners, customers, and stakeholders were identified.

In step 2, define process and identify customer requirements, the EA preparation and review process was charted, and time required for preparation and review was analyzed; it was determined that EAs should be thorough, complete, objective, legally sufficient, and understandable.

In step 3, define and establish measures, it was determined that guidance for NEPA documentation lacked standards for preparers and reviewers, leading to conflicting expectations of what is required. At the time the Team was being formed, EH-25 was preparing its Recommendations for Preparing EAs and EISs, but more formal Quality Assurance (QA) guidance is needed.

In step 4, assess conformance to requirements, areas analyzed included conformance of EA preparation to requirements, conformance of preparation and review cycle time to stakeholder expectations, and chronic problem areas, including EA quality and review time.

In step 5, process improvement opportunities, quality improvement opportunities that were identified included implementing EH-25's EA preparation guidance, improving preparer and reviewer training, identifying ownership, establishing a formal QA preparation program, developing standing preparation capability, developing an internal EA scoping process, implementing EA preparation contracting improvements, and refining the EH Recommendations paper based on user feedback. Process cycle time reduction opportunities included improving preparation quality, reducing multiple reviews, delegating EA approval and FONSI authority, developing in-house EA preparation capability, and improving management information and tracking of program review.

In step 6, rank improvement opportunities and set objectives, the Team identified but did not rank as to importance the following improvement opportunities:

- Training in the use of EH-25's guide for the preparation of EAs, EH **Recommendations for Preparing EAs and EISs.**
- A process for integrating NEPA analysis into program and project planning.
- Uniform EA review procedures among Program Offices.
- Quality Assurance programs for preparing and reviewing EAs.
- Delegation of approval authority for EAs and FONSIIs from EH to Program Offices and from Program Offices to Operations Offices following establishment and implementation of internal scoping procedures and Quality Assurance programs.
- Annual reviews at which program and project personnel could share EA lessons learned with NEPA compliance officers.
- Audits of Operations Office EA preparation to ensure quality.
- Use of contracting process to ensure EA quality and timeliness.
- Improved systems for scheduling and tracking EAs.
- Clarifying and identifying EA ownership.
- Commitment in DOE policy to quality and timely NEPA documentation.

In Step 7, improve process quality, implementation of these recommendations and other improvement actions would result in higher quality preparation processes and an overall reduction in the time required for the review, revision, and approval process. The Team recommends that EH take the lead to implement these recommendations.

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## I. Introduction

At the November 1992 meeting of the Weapons Production Complex Area Managers, Weapons Production Plant Managers, and Design Laboratory Managers, the Plant and Laboratory Managers identified the need to reduce the review and approval time for documents prepared under the National Environmental Policy Act (NEPA) as one of their top five issues. The managers used a facilitated Total Quality process to identify the issues. Their principal concern related to the length of time required for the review and approval of Environmental Assessments (EAs) and the issuance, when warranted, of Findings of No Significant Impact (FONSI). As a result of that meeting, the Manager of the Kansas City Area Office, Earl W. Bean, was asked to establish a Team of DOE Headquarters and Operations Office personnel to analyze the process by which DOE prepares EAs and to suggest improvements to that process.

Mr. Bean contacted the Director of the Office of NEPA Oversight, Carol Borgstrom, and requested her assistance in assembling a Total Quality Process Management Team to address these concerns. Ms. Borgstrom agreed to do so with the approval of the Deputy Assistant Secretary for Environment, Raymond P. Berube. The following individuals agreed to be members of the Process Management Team (PMT).

Earl W. Bean, Kansas City Area Office  
Carol M. Borgstrom, EH-25  
David M. Caughey, Kansas City Area Office  
Henry K. Garson, DP-3.2  
Michael H. Kleinrock, EM-22  
Stanley Lichtman, EH-25  
Gary Palmer, DP-3.2  
Teresa Perkins, Idaho Operations Office  
Patricia W. Phillips, Oak Ridge Operations Office  
Timothy D. Pflaum, DP-3.2  
Constance L. Soden, Albuquerque Operations Office  
Janine M. Sweeney, GC-11  
Diana Webb, Los Alamos Area Office

Team members were recruited in February 1993 and the Team held its first meeting in March. They met regularly from March through October 1993.

The Team used a Process Quality Management Improvement (PQMI) technique that was adapted by AT&T from a Florida Power and Light Total Quality

process. This seven-step improvement process is illustrated briefly in Figure 1.

This report of the Team's analysis, findings, and recommendations follows the seven-step management improvement process.

Figure 1. The Seven-Step Process Quality Management Improvement Technique (PQMI)  
Quality is Consistently Meeting Customer Expectations

<p><b>Some Principles of Quality</b></p> <ul style="list-style-type: none"> <li>• Customer comes first</li> <li>• All work is part of a process</li> <li>• Prevention is achieved through planning</li> <li>• Quality improvement happens through people</li> <li>• Quality improvement never ends</li> </ul>			
<p><b>What is PQMI?</b></p> <p><b>Seven Steps</b></p>	<p><b>Step 1: Establish Process Management Responsibilities</b></p> <p>Process Owner</p> <ul style="list-style-type: none"> <li>• Profound knowledge</li> <li>• Empowerment</li> <li>• Accountability</li> <li>• Process Management Team</li> <li>• Stakeholders</li> <li>• Specialized knowledge</li> </ul>	<p><b>Step 2: Define Process and Identify Customer Requirements</b></p> <ul style="list-style-type: none"> <li>• Define process</li> <li>• Customers and suppliers</li> <li>• Inputs and outputs</li> <li>• Flowchart</li> <li>• Customer requirements and validation</li> </ul>	<p><b>Step 3: Define and Establish Measures</b></p> <ul style="list-style-type: none"> <li>• Characteristics of good measures</li> <li>• Types of measures</li> <li>• Most difficult step</li> </ul>
	<p><b>Step 4: Assess Conformance to Customer Requirements</b></p> <ul style="list-style-type: none"> <li>• Collect and review data on process operations</li> <li>• Common and Special causes</li> <li>• Compare performance of stable processes to requirements</li> <li>• Determine chronic problem areas</li> </ul>	<p><b>Step 5: Investigate Process to Identify Improvement Opportunities</b></p> <ul style="list-style-type: none"> <li>• What prevents us from meeting customer requirements?</li> <li>• Sub-process contributes to gaps</li> <li>• Rank opportunities - Pareto</li> <li>• Focus on vital few vs. useful many</li> </ul>	<p><b>Step 6: Rank Improvement Opportunities and Set Objectives</b></p> <ul style="list-style-type: none"> <li>• What opportunities do we work on?</li> <li>• Selection criteria</li> <li>• Decision matrix</li> <li>• Coordination with stakeholders</li> <li>• Set objectives</li> </ul>
			<p><b>Step 7: Improve Process Quality</b></p> <ul style="list-style-type: none"> <li>• Develop action plan</li> <li>• Define problem</li> <li>• Identify root causes</li> <li>• Develop potential fixes</li> <li>• Test and evaluate</li> <li>• Implement and monitor</li> </ul>

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## **II. Step 1: Establish Process Management Responsibilities**

At their first meeting, the Team identified the owners, the customers, and the stakeholders of the NEPA process as it relates to issuance of NEPA documentation. The Assistant Secretary for Environment, Safety and Health was identified as the primary process owner, with responsibilities for approval of NEPA documents that are carried out based on recommendations by the Director of the Office of NEPA Oversight. Other owners are Secretarial Officers whose programs or projects are analyzed in EAs. Many stakeholders were identified, some with ownership of portions of the process. Stakeholders include DOE Headquarters Program Offices, Operations Offices, Area/Site Project Offices, Management and Operating Contractors, and subcontractors who prepare NEPA documents.

The Team identified DOE decision makers, the general public, various interest groups, and state, tribal, and local governments as the principal customers of the NEPA process. At different times throughout the process, however, individuals or groups assume different roles as owners, stakeholders, suppliers, or customers.

In analyzing ways to improve the process, it became apparent that identifying the role being played at any one time was important.

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## **III. Step 2: Define Process and Identify Customer Requirements**

### **A. Define Process**

The primary products of the NEPA process are environmental impact statements (EISs) and environmental assessments (EAs). DOE also requires documentation for application of certain categorical exclusions (CXs). The Team decided to limit its consideration to the preparation and review process for EAs for several reasons. In comparison with EISs, a larger number of DOE activities are affected by EAs and the requirements for preparing EAs are less well defined by law or regulation. Moreover, because projects that are required to be analyzed in an EIS may have significant impact on the environment and are generally large, expensive, and programmatically important, they usually receive higher priority in scheduling, management attention, and review time. CXs are of lesser concern because they are for activities for which no significant impacts are expected and because they usually apply to small projects for which an efficient document preparation and approval process already exists.

The current overall EA preparation, review, and approval process is generally defined in DOE Order 5440.1E, NEPA Compliance Program. In order to more specifically define the process, Team members prepared detailed flowcharts for various portions of the preparation and review process. This enabled the Team to scrutinize the process in detail. A flowchart of the overall preparation and review cycle is shown in Figure 2.

**Figure 2. Typical Environmental Assessment Preparation, Review, and Approval Cycle**

**INSERT ORIGINAL**

The flowcharts identified several reasons why the preparation and review time for an EA can be very lengthy. EAs often involve both a Management and Operating (M&O) contractor and a subcontractor that actually prepares the draft EA. The flowcharts indicated that the subcontracting process by the M&O contractors for preparation of EAs is often a time-consuming process.

When a draft EA has been prepared, it is subjected to several reviews. The reviews are usually sequential by Area, Site, or Project Office, the Operations Office, the Headquarters Program office, EH-25 and GC-11, and states and tribes. Each of these sequential reviews usually requires revisions to the document. Finally, after all of these reviews and revisions have been completed, the Assistant Secretary for Environment, Safety and Health approves the EA and, if warranted, issues a FONSI.

Significantly, several crucial processes were conspicuous by their absence from the flowcharts. An internal EA scoping process was not reflected on the flowcharts because it is not routinely incorporated into the NEPA planning process. Similarly, quality assurance (QA) programs were missing from the flowcharts because they are not an inherent part of the document preparation process. In addition, it became apparent that the NEPA process needed to be better integrated into project conceptual planning and design.

NOTE: The majority of Team members work with production facilities or National Laboratories operated by M&O contractors. The NEPA processes used by the Power Marketing Administrations and other programs may vary somewhat from those identified by the Team.

## **B. Identify Customer and Stakeholder Requirements**

Although no survey of customers and stakeholders was undertaken, the Team is aware of many customer and stakeholder requirements for an EA. The requirements are generally identified in Council on Environmental Quality (CEQ) regulations and guidance, DOE regulations and guidance, and precedence provided by judicial decisions. Some of the general requirements of the customers and the stakeholders are that EAs must be complete, objective, legally sufficient, and understandable.

The Team focused on the needs of internal customers and stakeholders, who are also known to desire a timely, meaningful, and responsive process. Several internal stakeholders have identified a lack of timeliness in the review and approval cycle as a significant issue at several DOE plants and laboratories. Other stakeholders have identified a lack of quality and timeliness in document preparation as a significant issue.

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## IV. Step 3: Define and Establish Measures

Experience with process management improvement indicates that defining and establishing good process measures is the most difficult part of the process. Only a few measures of how well customer and stakeholder expectations are being met are actually tracked. There are partial data on the length of various steps in the EA preparation and review cycle. There are strong general impressions about the quality (for example, how well requirements are met) of the EAs in the various steps in the review cycle.

### A. Measuring the Adequacy of NEPA Documentation

In February 1993 when the Team was formed, specific guidance for preparation of EAs was not available. The available guidance from CEQ and DOE was general and was still evolving. Compliance with this general guidance depended to a large extent on the preparer's own experience with NEPA. The reviewers of the documentation similarly had only general guidance to determine the adequacy of the EA. Because there were no standards, an individual reviewer's NEPA experience and training were very significant in his or her ability to determine the adequacy of an EA. Based on their broader knowledge of and experience with NEPA, the reviewers generally expected more comprehensive analysis and clearer exposition than the preparers provided.

NEPA Compliance Officers (NCOs) generally have more NEPA experience and better NEPA training than the Program or Project personnel with line responsibility for preparation of the NEPA documentation. Close cooperation between both groups could assist the program and project personnel in determining the adequacy of the documentation on a more timely basis.

At the time the Team was formed, EH-25 was preparing more detailed guidance for the preparation of EAs. This guidance, issued in May 1993 under the title Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements (EH Recommendations paper), provides an improved basis for preparing EAs as well as a more objective basis for the reviewers to judge the adequacy of draft EAs.

While the EH Recommendations paper document is a valuable asset to the EA preparer and reviewers, formal Quality Assurance programs haven't been established by DOE or the M&O contractors to measure the adequacy of NEPA documentation. The review process is an informal and primarily technical review by both NEPA and Program and Project personnel. More formal QA programs exist for many DOE and M&O contractor activities. Formal QA programs could be developed for use by the M&O contractors, their EA preparation subcontractors, and the first level of DOE review to measure the adequacy of the documentation. Formal QA programs would also facilitate audits of the NEPA documentation process.

## **B. Measuring Preparation and Review Cycle Time**

Most DOE organizations track the time taken in at least some of the various steps in the EA preparation and review cycle. With some limitations, sufficient data exist to broadly characterize the EA process time.

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# **V. Step 4: Assess Conformance to Requirements**

## **A. Conformance of EA Preparation to Requirements**

Team members involved in the review cycle at the Headquarters, Operations Office, and Area Office levels, with one exception, have not collected data on the extent of revisions required for EAs that they have reviewed; however, they are of the opinion that extensive revisions have often been required of EAs at each level of review.

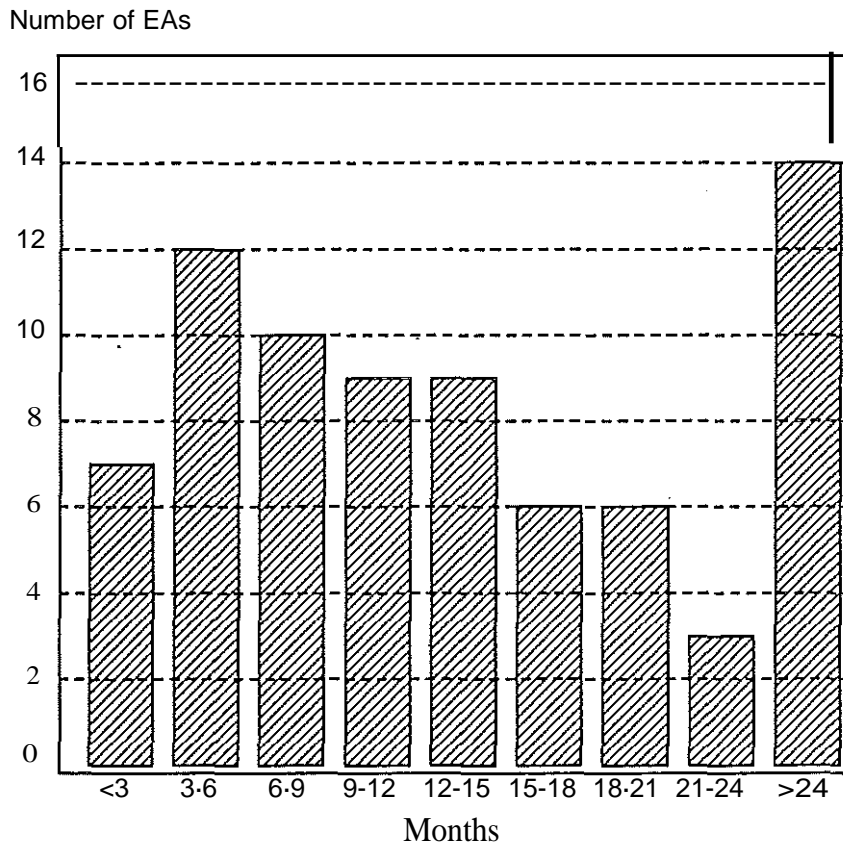
The need for extensive revisions to many EAs at all levels of the review process indicates that EAs often do not conform to what reviewers perceive to be the requirements. Moreover, the frequency of errors in the last stages of review also indicates the need to improve the quality of the review process at each level of review.

## **B. Conformance of Preparation and Review Cycle Time to Stakeholder Expectations**

Figure 3 illustrates the wide range of times taken to complete EAs. The Team was unable to find a consistent starting point (with consistent data) to measure the time that it takes to prepare, review, and approve EAs. The best measure the Team could find was the time from the formal

determination to prepare an EA until the time that a FONSI was issued. Work toward preparation of EAs often begins (sometimes inappropriately) prior to the issuance of the formal determination; therefore, this measure understates to some degree the time taken to complete EAs.

**Figure 3. EA Completion Time  
(From EA Determination to FONSI)**



Based on 76 EAs completed in FY92 and FY93

Median = 390 days (13 months)

Average = 455 days (15.2 months)

Figure 3 shows a very wide range of completion times for EAs that received FONSI in FY92 and FY93. Given the limitations in the data, the Team believes that the most useful measure of completion times is the range of times that it took for completion of the middle 50 percent. This range includes 38 EAs that were completed in six to 18 months; 19 EAs took less than six months to complete and 19 EAs took more than 18 months to complete. The average time for completion, which is a less meaningful measure given the wide range, was 15 months.

The reasons for the wide variation in completion times are not entirely clear, but the Team believes the following were factors in the variations. Some of the EAs were completed in short times due to very high priority of the projects. Others may have been completed quickly because the projects were simple and straightforward, virtually without environmental consequences. The Team believes that project complexity and uncertainty contributed to some very lengthy completion times. Poor quality of EAs and multiple revisions lengthened the completion time of many EAs. Some EAs apparently languished in the process from a perceived lack of ownership.

- **Figure 4** is a summary of the median EA review and approval times for three DOE Headquarters Offices, Defense Programs (DP), Environmental Restoration and Waste Management (EM), and Energy Research (ER). The review and approval times for individual EAs varied widely. A significant portion of this time is the time required for the preparing organization to revise the EAs following Headquarters' reviews. In FY91, ten EAs received FONSI for DP activities. The DP median review and approval time was seven months. In FY92, the median Headquarters review, revision, and approval time for 24 DP EAs was 10.6 months. In FY93, the median DP time for 10 EAs was 10.4 months. In FY91 the median Headquarters review and approval time for 3 EM EAs was 4.3 months. In FY92 the EM review and approval time for 13 EAs was 10.1 months. In FY93 the EM time for 13 EAs was 15.5 months. Energy Research has data for eight EAs for which the average HQ review and approval time was nine months.

Figure 4. EA Review and Approval Times for Headquarters Program Offices

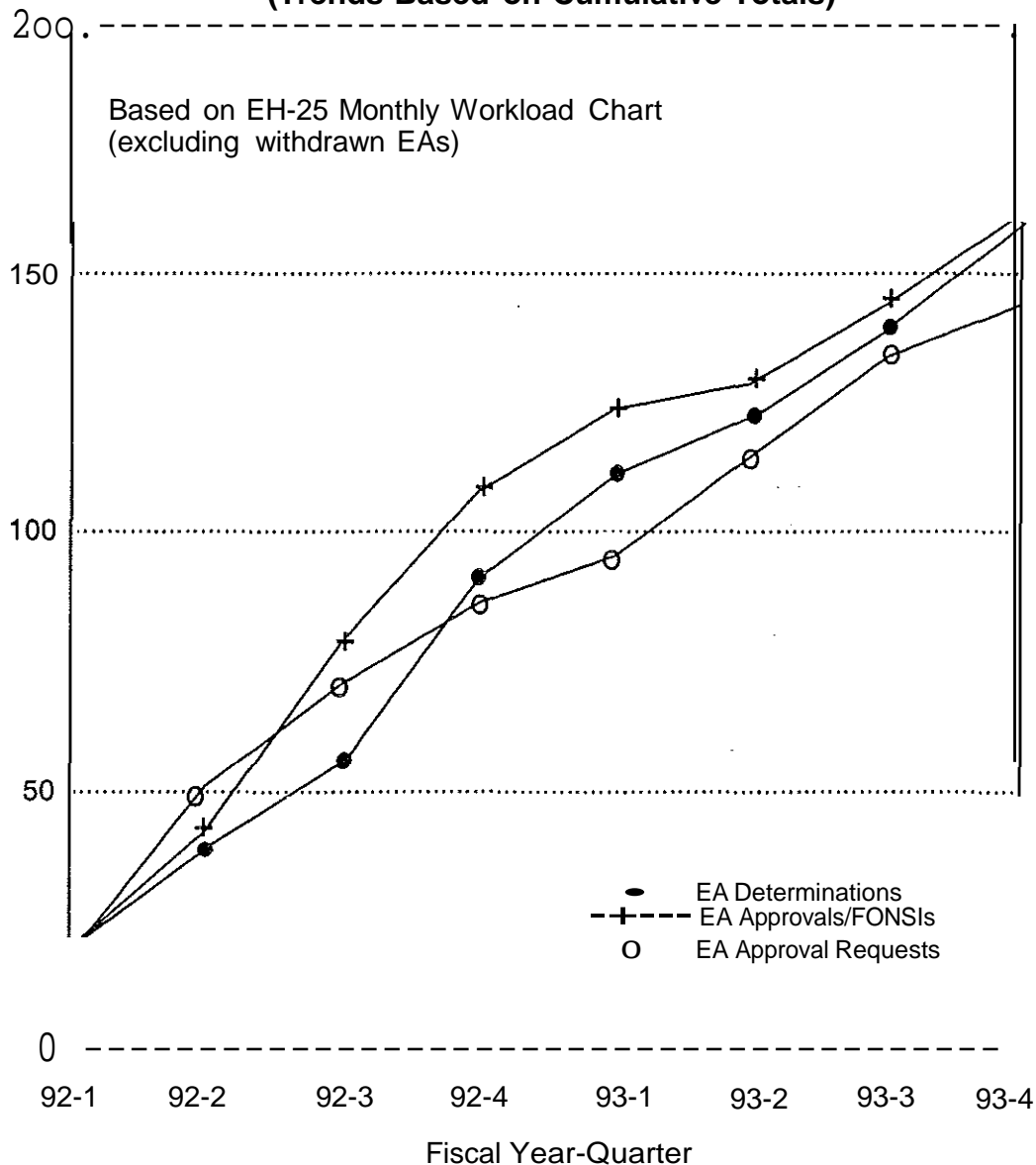
Office	Year	#EAs	Days/Months' (median)
DP	FY91	10	210/7
	FY92	24	318/10.6
	FY93	10	311/10.4
EM	FY91	3	133/4.3
	FY92	13	304/10.1
	FY93	13	465/15.5
ER		8 studied (first since SEN-15-90 issued)	280/9 (mean)

- Summary of EA processing time from receipt at HQ Program Office to FONSI. These times include the time taken by the preparing office to make revisions to the EAs as the result of Headquarters comments

For some individual EAs with high Departmental priority, the preparation and review time has been shortened dramatically by providing the necessary resources and focusing management's attention on them. Devoting extraordinary resources to an individual EA may extend the time for other EAs in the process. With approximately two hundred EAs under preparation throughout DOE at any one time, a stable, high-quality, and more predictable process for the average EA is necessary.

**Figure 5** shows trends based on cumulative totals for EAs in the review and approval cycle times for FY92 and FY93:

**Figure 5. Pending and Completed EAs, FY92 and FY93  
(Trends Based on Cumulative Totals)**



accustomed to considering many alternatives related to design and cost, they have not been adequately trained to consider alternatives related to environmental impact. The EA then is developed separately from the project plan and scope, when it should be an integral part of the planning and scoping process.

Failure to integrate EA preparation into project planning often results in failure to adequately consider reasonable alternative actions. This in turn results in less opportunity for environmental considerations to influence project planning and the need for extensive revisions to the documentation.

#### **D. Inadequate Scoping**

In many cases, a contractor is tasked to prepare an EA for a proposed action with little specific direction except to have it completed by a certain date. The document preparer may receive the conceptual design report and the name of the contractor project manager and have little interaction with project personnel, DOE NEPA specialists, or other environmental specialists. The alternative actions and scope of the NEPA documentation may be defined by individuals who have little involvement in the project. The resulting document is often inadequate.

#### **E. Lack of Quality Assurance Program**

Contractors are generally not required to establish formal QA programs for the preparation of NEPA documentation. Formal QA programs can be designed to ensure that the EH Recommendations paper and other EA requirements have been addressed, including EA scoping and integration into project planning. A QA program will not substitute for thorough technical and editorial review during preparation; however, the QA program can specify adequate review procedures.

#### **F. Document Preparation**

The majority of DOE Program and Operations Offices do not have the personnel resources to prepare NEPA documents in-house. Instead, EAs are usually prepared by contractors. DOE does not allow M&O contractors to prepare EISs because CEQ regulations prohibit preparation by someone having a financial or other interest in the outcome of the project; however, this prohibition does not apply to EAs.

DOE Headquarters' reviews of EAs have shown that preparation by DOE in-house normally results in higher quality documentation than that prepared by M&O contractors. Preparation by an M&O contractor or an experienced support contractor usually results in higher quality documentation than preparation by a less experienced subcontractor. This disparity in quality is likely the result of several factors, including the following.

(1) Often, DOE does not clearly define the scope of work or expectations before the contractor or subcontractor is tasked to prepare an EA; (2) subcontractor personnel tend to change more frequently than DOE or M&O contractor personnel; therefore, they have less training and experience with DOE's EA preparation process; and (3) subcontractor personnel may not have close working relationships with project personnel and NEPA and environmental specialists who are knowledgeable of the project. Resolution of issues arising during EA preparation becomes more difficult in these circumstances.

## **F. Lessons Not Learned**

NEPA review experience (i.e., comments, guidance, and decisions provided during the approval process) gained from previous EA reviews often is not applied to subsequent EAs. Learning is hampered by a system in which EA preparers are selected by subcontracting, which tends to provide preparers that are not highly experienced with DOE NEPA requirements.

Lessons that should be learned from the EA review and approval process are communicated by and through EH-25 and the NEPA Compliance Officers of the various organizations. DOE may not be doing an adequate job of communicating these lessons to the DOE Program, Field Office, and contractor personnel that are responsible for EA preparation.

## **2. Process Quality Problems**

### **A. Extensive Revisions**

The several chronic problems described above, resulting in the poor quality of EAs, also contribute significantly to the length of the EA review and approval cycle. At all levels of review Team members often see poor quality documentation that requires extensive revisions.

Quality relates to all substantive and editorial elements of an EA. Basic flaws, such as inadequate identification of reasonable alternatives and analytical errors require extensive revision by the preparers. Less significant flaws may be corrected through consultation with the authors. In either case, the process is lengthened. Improved quality of draft EAs should result in shorter review, revision, and approval times.

### **B. Multiple Review/Revision Process**

The current EA review and approval process shown in Figure 2 involves sequential reviews by the Area, Site, or Project Office, the Operations Office, the Headquarters Program Office, and EH-25/GC-11. Each review generates comments normally requiring revisions by the preparing organization. Revision times vary widely, but each revision commonly adds two to four months to the review and approval cycle. Revision times are usually tightly controlled for EAs with high Departmental priority.

Overall, the revisions from review by four separate organizations could account for up to one year or more of the review and approval cycle. Elimination of either reviews or revisions would reduce the length of the process, but would also lose the value added by those portions of the process.

The length of the process itself creates a problem with the currency of the data in the EA. After six months to one year in the review process, data can become stale and outdated, requiring further revision.

The length of the review process and the number of revisions also create a problem with document ownership. It is difficult to say who "owns" an EA at any intermediate step in the process. As each reviewer adds his or her own touches to the document, it belongs less to the Field Office responsible for preparation and more to the Headquarters Program Office, EH, or GC. There is no identified individual closely associated with the proposed project or elsewhere who is responsible for the accuracy, coherence, and consistency of the document when all of the various revisions are incorporated.

### **C. Inadequate Tracking and Management of DOE Headquarters Program Office Review Process**

Some DOE Headquarters Program Offices do not have adequate tracking information and management systems to effect timely review of EAs. Rather than formally scheduling the review of EAs, Program Offices usually rely on Project personnel to push EAs through the review process. EAs not perceived to have high priority can inadvertently languish in the review cycle.

The Team believes that the review time in the Program Offices could be reduced with improved tracking systems and increased management attention. In more than a few instances, EAs have languished for many months without review for no apparent reason.

---

## **VI. Step 5: Process Improvement Opportunities**

### **A. Quality Improvement Opportunities**

#### **1. Implementation of EH's EA Preparation Guidance**

EH's Recommendations for the Preparation of EAs and EISs, issued in May 1993, provides extensive guidance on substantive and editorial aspects of EA preparation. Implementation of this guidance should materially improve the quality of EAs. The EH Recommendations paper provides a common understanding of EA requirements that should facilitate both preparation and approval of EAs. The guidance is not a cookbook approach to preparation; rather, it requires thoughtful application to the unique circumstances and potential impacts each proposed action presents. The EH Recommendations paper employs a "sliding scale" approach to NEPA analysis, reflecting the spectrum of significance of environmental impacts. Key elements of this approach are to focus effort on significant environmental issues and alternatives and to discuss impacts in proportion to their significance.

The EH Recommendations paper has been widely distributed throughout DOE and its contractors. EH-25 has developed a training curriculum for use of the EH Recommendations paper and provided the associated training materials to the NCOs in August 1993. Implementation of the EH Recommendations paper will require a significant training effort to ensure that EA preparers and reviewers use the guidance appropriately.

## **2. Improving Training of Preparers and Reviewers**

Most Operations Offices have a training plan as a part of their NEPA procedures; however, due primarily to workload, the plans have been only partially implemented. Training of program/project and facilities personnel in the basic principles and requirements of NEPA review is critical to integrating NEPA process into project planning and scoping. Training EA preparers and reviewers in the use of the EH paper is very important to the improvement of EA quality. The training should also outline the use of QA plans for preparation of EAs.

## **3. Identification of Ownership**

Integration of the NEPA analysis into project planning and configuration control of EAs could be enhanced with the identification of an EA "owner." The owner would manage the EA through the review and approval cycle to ensure that project schedules are met. The owner usually would be a project-level individual in the Operations Office, such as the project manager, or, for EAs that pose program-wide issues, a corresponding individual at the Headquarters Program Office.

## **4. Formal Quality Assurance Preparation Program**

DOE has used QA programs for many years to ensure that requirements and specifications, including related documentation, are met for product, construction, and operational activities. QA plans could help to ensure that all applicable requirements have been complied with in the preparation and review of EAs. QA plans could also help to ensure that training requirements are being met by including them among the items whose completion is required under the plans. The Team prepared a sample QA plan (Appendix A) for the EA preparation and review process.

The Kansas City Area Office and its M&O contractor, AlliedSignal, are piloting specific QA plans at the DOE's Kansas City Plant for the preparation and review of two EAs. It should be noted that QA plans are not a substitute for thorough and objective technical and editorial review. The plans can enhance quality performance by specifying required elements.

## **5. Development of Standing Preparation Capability**

Team members have observed that higher quality and more consistent EAs are produced under two conditions. One occurs when the entity which prepares the EAs has a work force that is familiar with NEPA as applied to DOE and that has a degree of stability and longevity. Stability in the organization preparing EAs, whether composed of DOE or contractor personnel, appears to be the important element which allows experience to develop and apply lessons learned which can then be incorporated into subsequent documents. Sufficient workload is also a key ingredient to this stability.

The second condition involves a situation in which the preparing organization works in a close relationship with project personnel and NEPA specialists knowledgeable about the project. An interactive relationship throughout the planning and preparation of the document ensures that the description of the proposed action and analysis of alternatives will be clear and accurate and that the evaluation of the impacts will be appropriately scaled.

These situations can be fostered by maintaining support service contracts or by developing in-house preparation capability within the DOE or the prime contractor organization. Regardless of the arrangement for preparation of EAs, frequent contact between customers and suppliers via scoping, guidance, and status meetings is necessary to ensure that documents meet customer requirements.

## **6. Development of an Internal EA Scoping Process**

Extensive revisions to EAs have often been required because important issues have been overlooked or not analyzed properly. These deficiencies can be avoided by conducting an early EA scoping process as part of the program/project planning.

The purpose of the internal scoping process is to determine the issues that need to be addressed for a proposed action and to determine the method and extent of the analysis. It would bring together the internal DOE stakeholders to define the scope of the EA.

The Team has prepared an approach (Appendix B) for conducting internal scoping for EAs.

An adequate internal scoping process would provide the information necessary for preparing a thorough and objective scope of work. A well-developed scope of work would help ensure quality documentation, establish a baseline to guide both preparers and reviewers, and allow some recourse if the documentation does not meet the scope of work.

Internal scoping would not replace the need or desire for public input either through an EA scoping process involving public, state, local, and tribal governments or through contacts with specific interest groups.

## **7. EA Preparation Contracting Improvements**

As mentioned previously, selection of new contractors for the preparation of individual EAs has resulted in some quality problems. In addition, competitive procurement adds to the length of time to prepare an EA. Both quality and timeliness could be improved if contractors could be prequalified to prepare EAs and were then chosen from a prequalified list. Alternatively, well-qualified subcontractors could be placed on retainer or support service contract and could prepare EAs as required. Both of these approaches are likely to reduce procurement time and improve the contractor's ability to attain a stable, qualified team of preparers. To the extent possible, the contracting process should be used to ensure that the product delivered is adequate to satisfy the desired scope of the EA and to encourage high quality.

## **8. Further Refinement of the EH Recommendations Paper, Feedback from Users, Continuous Improvements**

As the preparers implement and use the EH Recommendations paper, a formal mechanism should be set up for EH-25 to receive feedback from the users to accumulate lessons learned. This would enable EH-25 to continuously improve the preparation guidance.

## **B. Process Cycle Time Reduction Opportunities**

### **1. Improving Preparation Quality**

If the process quality improvement opportunities outlined in item A above were implemented, fewer and less extensive revisions to EAs would be necessary. This would reduce the review and revision time. Although the time savings probably would be substantial, the savings is difficult to estimate because a portion of the cycle time is spent waiting for review and revision. Improved quality will not reduce the waiting time unless the quality is such that an entire revision is eliminated.

### **2. Reduction of Multiple Reviews**

#### **A. Concurrent Reviews**

EAs are currently reviewed and revised sequentially by the Area/Site/Project Office, the Operations Office, the Headquarters Program Office, and EH-25/GC-11. Although the process may be tightly controlled for high priority EAs, the Team estimates that each review commonly takes approximately one to three months and each revision commonly takes two to four months. If the Area/Site/Project Office, the Operations Office, and the Headquarters Program Office reviewed the document concurrently, and if only one revision were performed for the concurrent review, the Team estimates that an average of about seven months could be saved in the process.

In order to encourage line management's accountability, EH-25 and GC-11 generally prefer not to participate in a concurrent review unless it is necessary to meet a significant schedule objective. These offices are available, however, to help resolve issues that preparing offices bring to their attention.

#### **B. Efficient Sequential Reviews**

Reviewers need not return an EA to the originators to incorporate minor changes. Instead, reviewers could mark up the document as required and send the revised document forward to the next reviewers. When appropriate, a reviewer would first check the acceptability of such revisions with the DOE originator or other appropriate party. This process minimizes the sometimes substantial individual and cumulative delays associated with the purely mechanical aspects of incorporating comments. This process of sequentially sending revisions forward, however, is not appropriate for resolving significant issues and does not apply when the necessary revisions require the authors of the EA to provide more information or analysis.

### **3. Delegation of EA Approval and FONSI Authority**

Because delegating EA and FONSI approval authority to program or field offices would eliminate steps in the approval process, it therefore poses potential for significant time savings. The Team recognizes, however, that this potential savings would not be totally achieved if the approving office were to take longer in preparation, review and revision when that office is fully accountable for the quality of the final product. Further, some Team members expressed concern about potential loss of value under an abbreviated approval process. These issues are addressed below.

#### **a. Delegation to Program Offices**

The Team estimates that delegation of approval authority to the Program Offices has the potential to save approximately three months of EA approval time.

#### **b. Delegation to the Operations Offices**

The Team estimates that delegation of approval authority to Operations Offices has the potential to save approximately six months of EA approval time. Reduction in cycle time from delegation to Operations Offices is the most certain of any of the above since it eliminates complete steps in the process cycle.

#### **c. Potential Loss of Value Under Delegations**

Some Team members are concerned that delegation of FONSI approval authority could result in lower quality EAs. To address this concern, the Team has prepared an example set of requirements for delegation of EA approval authority to Operations Office Managers (Appendix C). This set of sample requirements includes implementation of a QA plan and review of EAs by on-site counsel for legal sufficiency.

Even if the analytical and editorial quality of EAs were maintained under delegated approval authority, some Team members would remain concerned about losing other significant but intangible value that Headquarters Offices (EH, GC, and cognizant program offices) have added under the centralized approval system. This added value stems in part from Headquarters Offices' inherently broader perspective on and more complete knowledge of current departmental activities. In the case of EH and GC, their independence of and disinterest in the outcome of specific proposed actions also

adds value. Headquarters offices most often provide this value by pointing out reasonable alternatives, connected actions, and needs for providing public involvement opportunities that field offices may not have addressed in the NEPA process.

The concerned Team members believe, therefore, that any less centralized approval process than the current one should provide for EH, GC, and program office roles in the approval of EAs for which a broad departmental perspective would be most necessary and beneficial. The example requirements (Appendix C) allow for retention of approval by EH-1 or the Program Office of selected EAs based on pre-specified criteria. Even so, these Team members recognize that, for EH and GC, diminished overall involvement in EA reviews would reduce their knowledge base regarding DOE proposed actions. Consequently, the ability of EH and GC to provide effective real-time advice to the Secretary regarding NEPA compliance would be reduced.

#### **d. Audits**

Under delegation of EA approval and FONSI authority to the Operations Offices, EH-25 and the Program Offices would collaborate to audit the preparation, review, and approval of EAs by the Operations Offices.

### **4. Developing In-House Preparation Capability**

Development of in-house EA preparation capability could produce a more stable cadre of personnel, and the personnel would likely have a closer working relationship with the project personnel and DOE NEPA specialists. A stable EA preparation capability would also avoid an approximately 3-month procurement process to obtain the services of a contractor to prepare a specific EA and it would eliminate negotiation for contract modifications for revising the EA: Up to five months in the preparation and revision time could be eliminated. Even if a DOE office were unable to develop in-house preparation capability, M&O contractors could, in many cases, implement their in-house preparation capability rather than subcontracting. Support contracts with experienced EA preparers have also worked well.

It should be noted that in-house preparation of EAs by organizations that have only an occasional EA to prepare is probably not cost effective. It is probably more effective to use a preapproved contractor or a contractor placed on retainer.

## **5. Improve Tracking and Management of Program Reviews**

Currently, there is no coherent DOE tracking or status information system for EAs. Each organization has its own formal system, usually using a computer database program, or informal system, using a word processing or card system. In these formal systems, the contents are not consistent, the data are not transferable, and there is no interface that allows exchange of data. As a result, some organizations do not systematically manage EAs through the review process, but rather rely on Program/Project personnel to "push" EAs through the system. EAs sometimes have gone un-reviewed for long periods of time.

A formal tracking and management system for Headquarters Program Offices could enable review of each EA on a schedule established according to its priority. A special panel is needed to review and summarize the status of the existing EA tracking and management systems and to recommend improvements to allow better tracking, status determination, scheduling, and data interchange.

The creation of an EA tracking and management system is complicated by the lack of a commonly accepted schedule for the activities and times required to complete an EA. The Team prepared a sample schedule for a typical EA preparation, review, and approval cycle. This schedule could be used as the basis for tracking and managing the EA process cycle. The sample schedule is shown in Appendix D.

## VII. Step 6: Rank Improvement Opportunities and Set Objectives

The Team identified the following opportunities but it did not rank them in order of importance:

- A. Operations Offices, Program Offices, and EH-25 should deliver training on EH's Recommendations paper based on the training materials EH-25 has provided.
- B. EH-25 should set up a formal feedback system to assess the effectiveness of it's EH Recommendations paper.
- C. EH-25 should issue guidance for an internal scoping process for preparing EAs and integrating NEPA analysis into program/project planning.
- D. Operations Offices should develop and implement formal scoping procedures for EAs based on EH-25 guidance.
- E. Program Offices should establish efficient EA review procedures (e.g., concurrent review).
- F. Preparing offices should set up and implement Quality Assurance programs for preparing and reviewing EAs.
- G. EH should delegate approval authority for EAs and FONSIIs to Program Offices that have implemented internal scoping procedures and Quality Assurance programs.
- H. Program Offices should delegate approval authority for EAs and FONSIIs to Operations Offices that have implemented internal scoping procedures and Quality Assurance programs.

(Note: Some Team members believe that delegation to operations offices should be contingent upon demonstrated quality and capability related to a set of performance-based criteria. The criteria would have to be developed.)

- I. NEPA Compliance Officers should conduct an annual lessons learned review with program and project personnel who will likely be involved with EAs.

- J. EH and Headquarters Program Offices should establish programs to audit Operations Office EA preparation to ensure continued EA quality.
- K. To the extent possible, the contracting process should be used to ensure that EAs satisfy the desired contractual scope of work. A quality team composed of NCOs and contracting specialists should explore improved contracting possibilities (including incentives and penalties) to ensure high-quality EAs and more timely revisions in response to review comments.
- L. To minimize unnecessary delays, EH, Program Offices, and Operations Offices should apply more predictable EA scheduling procedures based on improved tracking and management systems.
- M. To ensure clear ownership of an EA from start to completion, an owner should be designated for each EA. The owner, normally the DOE operations office project manager, would be responsible for initiating, drafting, tracking review and concurrence, configuration control, and completing the EA. The owner's name, office, and phone number would be identified on working drafts of the EA, and, where appropriate, on the final document.
- N. DOE NEPA policy should be updated or reaffirmed, including a commitment to high-quality and timely NEPA documentation.

## **VIII. Step 7: Improve Process Quality**

The Team recommends that EH, in consultation with the program and field offices, take the lead for DOE in developing an action plan to implement the Team's recommendations outlined in Step 6. It is suggested that EH request the Headquarters Program Offices and Field Offices to implement recommendations that are appropriate to their organizations.

# Appendix A

## DOE Example Quality Assurance Plan for the Review of Environmental Assessment Documents

*DRAFT - January 19, 1994*

### I. Introduction

NEPA is the federal government's basic charter for assuring protection of the environment. Environmental Assessments are NEPA documents that analyze the environmental impacts of proposed actions and alternative actions and aid the Department of Energy in planning these projects. The preparation and review of Environmental Assessment Documents can take several months to complete, therefore it is essential to consider quality assurance requirements for these documents early in the NEPA process.

*Note: This example Quality Assurance Program Plan for the Review of Environmental Assessment Documents is based on the Kansas City Area Office Quality Assurance. Program Plan for the review of Environmental Assessment Documents. This example quality assurance program plan is not meant to be adopted as a plan that will be adequate in all situations for any DOE facility. Other DOE facilities wishing to develop similar quality assurance plans may need to modify this for their site-specific factors.*

This Quality Assurance Plan defines policy, responsibilities, minimum requirements, and provides guidance for implementing a comprehensive quality assurance program for the review of Environmental Assessment Documents at the Department of Energy's (facility name).

### II. Scope

The process requirements, established in this Quality Assurance Plan (QAP), shall be applied to the review of the National Environmental Policy Act (NEPA) Environmental Assessment (EA) Documents, as covered by DOE Order 5700.6C, "Quality Assurance".

### III. References

40 CFR 1500-1508, "Council on Environmental Quality National Environmental Policy Act (NEPA) Implementation Procedures; Appendices"  
10 CFR 1021, "Department Of Energy National Environmental Policy Act (NEPA) Implementing Procedures"  
10 CFR 1022, "Department Of Energy Compliance with Floodplain/Wetlands Environmental Review Requirements"  
DOE Order 5440.1E, "National Environmental Policy Act"  
DOE Order 5700.6C, "Quality Assurance" Other internal program drivers as appropriate

*Note: The following sections use the Kansas City Area Office organization as the example. Each DOE office preparing a Quality Assurance Plan would need to substitute its organization and appropriate roles and responsibilities in these sections.*

#### **IV. Organizational Roles and Responsibilities**

##### **A. Organization**

The organizational structure for the Kansas City Area Office ES&H Branch can be found in Attachment A.

##### **B. The ES&H Branch Chief shall be responsible for:**

approving the contractor's Quality Assurance Program Plan (QAPP),  
  
approving the EA before submittal to the Operations or Program Offices,  
  
and updating this QAP, as required, to incorporate additional customer requirements and expectations.

##### **C. The Environmental Manager shall be responsible for:**

reviewing the contractor's QAPP prior to approval by the ES&H Branch Chief,  
  
and reviewing the EA document.

##### **D. The Environmental Staff shall be responsible for:**

providing support to the Environmental Manager for the above stated responsibilities

Further explanations of these responsibilities are stated in the sections following.

#### **V. Approval of Contractor's Quality Assurance Program Plan**

The Environmental Manager shall evaluate the contractor's Quality Assurance Program Plan (QAPP) for the Preparation and Review of Environmental Assessment Documents to assure that it adequately addresses the technical and environmental requirements stated in the Section C References. An example NEPA Quality Assurance Program Plan designed to be used as an outline for the preparation of site- specific NEPA QAPPs is included as Attachment C.

The Operations Quality Assurance (OQA) Manager shall evaluate the contractor's QAPP to assure compliance with the quality requirements outlined in DOE Order 5700.6C, "Quality Assurance."

The ES&H Branch Chief shall provide approval of the contractor's QAPP, based upon input from the Environmental and OQA Managers.

## **VI. Review of Environmental Assessment – EA Document**

The Environmental Manager shall review the EA document to assure that:

The contractor's QAPP requirements are present and adequate.

The customer's requirements and expectations are fulfilled. This shall be accomplished by completing the checklists found in Attachment B and by performing a thorough technical and editorial review. The checklist was prepared based upon CEQ NEPA Regulations (40 CFR 1500), DOE NEPA Regulations (10 CFR 1021), Albuquerque Field Office NEPA Guidance Memoranda, EH-25's "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements," and other related federal environmental, safety, and health laws and regulations. The checklist is not meant to substitute for the original laws, regulations, and guidance. The checklist is not meant to replace professional knowledge, and it is not a substitute for thorough technical and editorial review of the EA Document.

The OQA Manager shall review the EA package to ensure that the ES&H checklists are complete and acceptable. Evidence of this will be provided by a signature on the concurrence ladder of the transmittal memo to the Operations or Program Offices.

The Area Office Counsel shall review the EA package to ensure that the EA is legally sufficient. Evidence of this will be provided by a signature on the concurrence ladder of the transmittal memo to the Operations or Program Offices.

The ES&H Branch Chief shall submit the EA document to the Operations or Program Office based upon input from the Environmental Manager, the OQA Manager, and the Area Office Counsel.

## **VII. Assessment of Process**

An audit schedule is to be set up at the time the need for the preparation of an EA is defined. This shall include audits applicable to each individual EA.

## **VIII. Training**

Personnel performing activities shall have the proper qualifications to assure suitable proficiency and adequate capabilities are achieved. Initial training shall be accomplished by attendance at a NEPA training course approved by the ES&H Branch Chief. Update training shall be required as needed to maintain competence;

such training shall complement and enhance the content of the initial training. Update training may be accomplished either on-the-job, attendance at a quarterly NEPA Compliance Officer Meeting, or other methods as approved by the ES&H Branch Chief.

## **Appendix B:**

# **DOE Internal Scoping of Environmental Assessments**

This paper discusses an approach for conducting informal internal scoping for DOE Environmental Assessments (EA). In order to improve the quality of first drafts of DOE BAs and increase the involvement and understanding of the DOE program managers, several groups within DOE and the EA preparer must have a common understanding of the EA process and the expected content of the document. Internal scoping should promote that understanding. DOE internal scoping should occur early in the project development cycle, when sufficient information about the basic parameters is available to permit discussion of the issues. This activity should be viewed in the first step in the process of preparation of the EA. It may occur at the point where the management and operating (M&O) contractor or other project proponent has decided to recommend to DOE that an EA would be the appropriate level of NEPA documentation but has not started writing the EA. Internal DOE scoping should be initiated by the DOE EA owner. The purpose of the internal scoping process is to determine issues and alternatives that need to be evaluated in an EA and the depth of analysis required. Scoping may occur in one or a few meetings or through an exchange of memoranda if the project is very straight forward. Internal DOE scoping would not replace the need or desire for public input through either a public EA scoping process or involvement of stakeholder or other interested groups. Internal scoping would still be beneficial to get more interdisciplinary input and obtain DOE concurrence on the proposed scope and level of analysis before the proposal is presented to external groups.

### **Scoping the EA**

Internal scoping should occur when a concept is first defined as a proposal and can be meaningfully evaluated. It may occur before the DOE EA determination if the determination may be controversial or if a better DOE understanding of the proposal would be beneficial. Scoping is intended to be an informal exchange of information to ensure the best product and a common understanding of the task. The participants should include the contractor project/design engineer and program manager, the DOE program/project manager, a contractor environmental/NEPA specialist, the field counsel, the DOE field NEPA Compliance Officer (NCO) or field NEPA Point of Contact, and other environmental

specialists as appropriate. Depending on the complexity, the degree of public concern or technical controversy regarding an action, the DOE-HQ program manager and NCO, EH-25 and GC-11 may need to be involved.

The first part of the discussion should center on the purpose and need for the action so that the scope of the proposal and the reasonable alternatives may be identified and agreed upon. The description of the proposed action should include all project requirements for construction and operation, i.e. utilities, office space, number of workers, land area required, transportation requirements, any other related or connected actions necessary to allow the project to proceed, and any schedule requirements or development of a schedule, see Appendix D. It should also be determined if other existing or ongoing NEPA reviews related to the action could be used for tiering or referencing and whether and how any public participation activities should occur. Public participation could include EA scoping (either a published notice that an EA is being prepared and that DOE would accept comments or an announcement of a public meeting), or public review and comment on a pre-approval EA or a proposed FONSI. Any public involvement issues or needs should be raised. The postulated environmental impacts and the potential significance of the impacts should be discussed to the extent that they are known. This information should be of a depth appropriate for making a NEPA determination, preparing a project schedule consistent with the NEPA process, and beginning the EA.

## **Depth of Analysis in the EA**

Internal DOE scoping should include a discussion of the depth of analysis of impacts from implementing the proposal and where the proposal fits on the "sliding scale of significance" (see "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements", U.S. DOE Office of NEPA Oversight, May 1993). The scoping group also needs to review the potential impacts, the significance of the impacts, and the level of public concern over particular impacts, i.e. air, surface water, groundwater, wetlands. The types of analysis to be conducted for the EA, including any field data that must be collected, computer modeling to be performed, and accident scenarios to be evaluated should be discussed. It may also be appropriate for the document preparers and people doing the modeling to communicate their information needs to the project engineers during this meeting to make sure that information is available early enough in the process.

The HQ program manager and NCO, EH-25, and possibly GC, may wish to participate in this part of the discussion, again depending on the complexity of the proposal. Since this information is not expected to be available in detail at this point in the evaluation, the scoping session(s) should be used to identify areas that need analysis and to discuss the depth of analysis that would be appropriate based on the preliminary information available and the sliding scale approach to NEPA analysis. The purpose of having a variety of disciplines and interested parties together at the meeting is to ensure that there are as few surprises during the analysis and EA preparation as possible.

## **Products of DOE Internal Scoping**

This process should result in a record of participants involved and decisions reached, as well as any non-consensus opinions. The decisions should include the scope of the analysis (to include purpose and need, and proposed action), a list of alternatives to be evaluated, the depth of analysis required for the potential environmental impacts, public involvement to be pursued, any schedules developed, and NEPA analyses from which to tier or to reference, when appropriate. This information should then be given to the EA preparers as their scope of work from DOE. It should also be maintained in project files to refresh corporate memories as the analysis progresses. The record may include target schedules and designated contacts or reviewers. If the analysis reveals new or more significant impacts than described the direction may need to be modified.

## **Factors Influencing Selection of Scoping Participants**

As discussed above, the amount of resources invested in the internal scoping of an EA should be proportional to the complexity, environmental impact and degree of existing or potential public concern and technical controversy of the action. Some issues to consider when developing the list of participants are: public controversy, range of environmental issues, complexity of the proposed action itself, proposed actions closely related to actions normally requiring an EIS, proposed actions related to ongoing NEPA reviews, proposed actions with schedules defined by milestones in negotiated agreements with regulatory agencies, or proposals with perceived or potential severe safety hazards. As the complexity/controversy increases, the level of interest by HQ programs, EH-25 and GC increases, and their

involvement early in the EA process should be considered.

While scoping prior to a determination may not benefit from EH or GC involvement and would probably not be considered a part of their role in the NEPA process, the HQ program office, including the NCO, should be involved in controversial determinations. EH-25 and GC should be considered for involvement in the discussions related to where the proposal fits on the sliding scale of significance. The HQ program office and NCO may choose to discuss the proposal with EH and GC to determine whether they should be involved.

## **Conclusion**

The end result of the internal scoping process should benefit and strengthen the DOE NEPA review process by leading to a common understanding early in the review cycle among all team members of what the EA analysis will include. This, in turn, should facilitate and expedite review and approval of the EA when the analyses are completed.

## **Appendix C**

### **Example Criteria for Delegation of EA/FONSI Approval Authority to Operations Office**

1. Operations office has established a policy and procedures to incorporate NEPA early in the planning and decision making process [see 5440.1E, Section 6.a.(1)].
2. Operations office, area/site office, and preparing contractors have implemented NEPA Quality Assurance Program Plans for the consistent application of the following criteria and guidance:
  - DOE Order 5440.1E, "National Environmental Policy Act" EH-25 "Recommendations for Preparing EAs and EISs" DOE Order 5700.6C, "Quality Assurance"
  - 40 CFR 1500-1508, "Council on Environmental Quality National Environmental Policy Act (NEPA) Implementation Procedures; Appendices"
  - 10 CFR 1021, "Department of Energy National Environmental Policy Act (NEPA) Implementing Procedures"
  - 10 CFR 1022, "Department Of Energy Compliance with Floodplain/Wetlands Environmental Review Requirements"
3. Operations office has issued approved NEPA procedures and record keeping requirements [see 5440.1E, Section 6.a(2) and 6.b.(6)].
4. Operations Office has designated a NEPA Compliance Officer (see EH-1 memorandum of July 15, 1992) who:
  - a. Reports directly to the operations office manager or the assistant manager with environmental responsibility or to the division director with environmental management responsibility.
  - b. Possesses NEPA expertise and technical understanding of projects and plans as evidenced by experience, training, and review of documents.
  - c. Has a substantive as well as procedural role through hands-on participation in planning, review, and concurrence.
5. Operations office and/or area/site office environmental compliance staff have sufficient variety of environmental disciplines to ensure properly supervised and technically accurate NEPA documents [see 5440.1E. Section 6.a. (7) and 6.b.(3)].
6. Operations office has a formal NEPA training program in place [see 5440.1E, Section 6.c.(1)].

7. Operations office and/or area/site office has on-site DOE Counsel with NEPA expertise to review for legal sufficiency and concur on EAs/FONSIs before approval by the operations office manager.
8. Retention of Approval Authority for Selected Projects:

Based on a review of periodic listings (at least annually) of forecasts of EAs from each operations office, EH or the responsible headquarters program office may retain approval authority for selected projects. The forecasts will identify EAs in the following categories:

  - a. Major Systems Acquisitions
  - b. EAs with unusual public concern
  - c. Projects that involve multiple sites and/or multiple programs
9. Compliance with the above criteria will be based on a review of the documentation of the criteria and periodic, independent, internal audits by EH-25 and the Program Offices to verify demonstrated acceptable EA/FONSI performance.